

NSF Highlights

NSF Research Experience for Teachers Enter into Extraordinary Phase in Hawaii

Highlight ID: 15299

Hawaii takes NSF Research Experiences for Teachers in Middle School to a statewide program in 2008. With initial funding from NSF's Industry/University Cooperative Research Center (IUCRC) program, the University of Hawaii College of Engineering's Center for Connection One enters an extraordinary new phase.

In 2007, the RET program became part of Governor Linda Lingle's *Hawaii Innovation Initiative - Fostering Innovation and Relevance through Science and Technology*. The Governor and the 2007 Hawaii State Legislature passed into law this initiative which funded \$1,469,610 and several positions over the two year period.

"The vision of the State of Hawaii's RET-Middle Schools is to bring the knowledge of engineering and technological innovation into the middle school classrooms through the active collaboration of teachers with university faculty, graduate and undergraduate students, and industry," says center site director Dr. Magdy Iskander. The Hawaii RET-Middle School program is a cross-disciplinary educational partnership driven by the needs and requirements of teachers, and by the technological advancements in engineering, specifically in advanced wireless communications and its phenomenally growing applications in a wide variety of fields.

"This commitment by the State of Hawaii, its university, and industry stakeholders will have significant impact on the middle school teachers and students across the State and on the development of its technologically qualified future workforce. Hawaii's statewide school system allows us to touch all schools as well as provide consistent support," says Patricia Hamamoto, Superintendent, Hawaii Department of Education.

Primary Strategic Outcome Goal:

- K-12 Education
- Teacher Training
- Public Understanding of Science

Secondary Strategic Outcome Goals:

- Discovery Research K-12
- Cyberinfrastructure ([definition](#))

How does this highlight address the strategic outcome goal(s) as described in the [NSF Strategic Plan 2006-2011](#)?:

This project expands the knowledge in science and engineering to K-12. This research aligns with NSF's goals of learning and research infrastructure.

Does this highlight represent transformative research? If so, please explain why.

The National Science Board has defined transformative research as "Research that has the capacity to revolutionize existing fields, create new subfields, cause paradigm shifts, support discovery, and lead to radically new technologies." National Science Board: [Enhancing Support of Transformative Research at the National Science Foundation](#)

No

Does this highlight represent Broadening Participation? If so, please explain why.

The concept of broadening participation includes: individuals from underrepresented groups, certain types of institutions of higher education, geographic areas (e.g. EPSCoR states), and organizations whose memberships are composed of institutions or individuals underrepresented in STEM or whose primary focus is on broadening participation in science and engineering. It is important to note that underrepresented groups vary within scientific fields.

Yes

The participation involves K-12 students from a wide group in the public school systems including but not limited to Pacific Islanders.

Are there any existing or potential societal benefits, including benefits to the U.S. economy, of this research of which you are aware? If so, please describe in the space below.

It is important for NSF to be able to provide examples of NSF-supported research that have or may have societal benefits.

Yes

A more computer literate workforce could result.

ENG/IIP 2008

Program Officer: Glenn Larsen



Middle school students enthusiastically learn about wireless communications.

Permission Granted

Credit: Aric Oumu, Honolulu, HI

NSF Award Numbers:

[0400575](#)

Award Title: University of Hawaii Partnership with the NSF I/U CRC for Telecommunications Systems

PI Name: Magdy Iskander

Institution Name: University of Hawaii

PE Code: 5761

NSF Contract Numbers:

NSF Investments: Human and Social Dynamics

Submitted on 01/29/2008 by Glenn H. Larsen

IIP: Approved 02/01/2008 by Kesh S. Narayanan

ENG: Approved 02/21/2008 by Joanne D. Culbertson